



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/993,074	11/19/2001	Christopher A. Gomez	03226.016002; P4479	7196

22511 7590 03/18/2005

OSHA & MAY L.L.P.  
1221 MCKINNEY STREET  
SUITE 2800  
HOUSTON, TX 77010

EXAMINER

PROCTOR, JASON SCOTT

ART UNIT	PAPER NUMBER
----------	--------------

2123

DATE MAILED: 03/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/993,074	GOMEZ ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Jason Proctor	2123	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 November 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. ____.  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date ____.   | 6) <input type="checkbox"/> Other: ____.                                    |

## **DETAILED ACTION**

Claims 1-20 have been presented for examination. Claims 1-20 have been rejected.

### ***Priority***

The Examiner acknowledges Applicant's claim for priority under 35 U.S.C. § 119(e) to provisional US Application 60/252,308 filed on November 22, 2000.

### ***Drawings***

1. New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because the reference numerals in Fig. 2 are hand drawn and all of Fig. 2 is faded and illegible. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Art Unit: 2123

2. Claims 1-20 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the term "an execution behavior of the instructions" which renders the claim vague and indefinite. A person of ordinary skill in the art would recognize several different interpretations of this term. "Execution behavior" could comprise memory usage, memory page faults, instruction prefetching, interrupt requests, cooperative scheduling, use of particular instructions, CPU usage, and many other concepts. As a result, the claim is vague and indefinite because there is no indication what interpretation should be given to the term "execution behavior".

Independent claims 11, 14, and 18 are similarly vague and indefinite for their use of the term "execution behavior". Where dependent claims recite "execution behavior", they are similarly vague and indefinite.

Claims not specifically mentioned stand rejected by virtue of their dependency.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-20 are rejected under 35 U.S.C. § 102(e) as being anticipated by US Patent No. 6,209,126 to Sasaki et al. (Sasaki).

Regarding claim 1, Sasaki teaches a technique of analyzing the pipeline processing of a source program to be executed in a microprocessor wherein an instruction developing unit develops each instruction line of the interpreted source program into states in pipeline stages of the pipeline processing (column 3, lines 47-50) and the image creator creates a pipeline image information that indicates the states of the instructions contained in the source program in pipeline stages (column 4, lines 3-5). The image display controller displays the source program and the pipeline image (column 4, lines 6-10; see also Figs. 6-16).

Regarding claim 2, Sasaki teaches analyzing a source program (set of instructions) according to an execution history (executing the set of instructions) with regard to stalls in the pipeline processing of the program (column 4, lines 38-58). Sasaki gives an exemplary suggestion that the execution history be provided by a simulator, however it is inherent that a simulator of a microprocessor performs equivalently to the microprocessor being simulated.

Regarding claim 3, Sasaki teaches simulating the execution of a set of instructions and generating internal state information representative of events occurring in the microprocessor from the simulation (column 4, lines 38-58).

Regarding claim 4, Sasaki teaches simulating the execution of a set of instructions and generating internal state information representative of events occurring in the microprocessor from the simulation (column 4, lines 38-58). It is inherent that the

Art Unit: 2123

simulator receives the set of instructions; therefore the instructions are exported to the simulator.

Regarding claim 5, Sasaki teaches displaying a number of instructions (Figs. 6-16; instructions such as “NOP” and “ADD” depicted on the left portion of the display; column 4, lines 31-37).

Regarding claim 6, Sasaki teaches displaying instructions occurring during a selected number of time periods (Figs. 6-16; numbered rows of the display correspond to instructions, equivalently clock steps).

Regarding claim 7, Sasaki teaches reading a history of simulated execution, equivalent to a log (column 4, lines 45-60).

Regarding claim 8, Sasaki teaches displaying instructions, simulating operation of the instructions, and generating internal state information representative of events occurring in the microprocessor (column 4, lines 31-60).

Regarding claim 9, Sasaki teaches displaying the internal state information (Figs. 6-16; column 4, lines 3-10). It is inherent that the system taught by Sasaki converts data as necessary in order to produce the graphical display.

Regarding claim 10, Sasaki teaches displaying the flow of instructions through a pipeline (Figs. 6-16; column 3, lines 47-55; column 4, lines 3-10).

Claims 11-20 generally recite a software tool, system, or tool that implements a method comprising various combinations of the limitations of claims 1-10, as indicated

Art Unit: 2123

below. As the Sasaki reference anticipates all of the limitations as recited by claims 1-10, so does Sasaki anticipate those limitations in other combinations.

Claims 11-13 recite a software tool that implements the methods of claims 1-3. As Sasaki teaches a computer-implemented technique (abstract), claims 11-13 are rejected for the same reasons as those given above for claims 1-3.

Claim 14 recites a system that implements the methods according to the combined limitations of claims 1 and 4. Claims 15-17 recite further limitations that correspond to claims 5, 6, and 9, respectively. As Sasaki teaches a computer-implemented system (abstract), claims 14-17 are rejected for the same reasons as those given above for claims 1, 4-6, and 9.

Claim 18 recites a tool that implements the method of claim 1. Claim 19 recites a tool that implements the method of claim 3. Claim 20 recites a tool that implements the method of claims 4 and 9. As Sasaki teaches a computer-implemented technique (abstract), claims 18-20 are rejected for the same reasons given above for claims 1, 3, 4, and 9.

### ***Conclusion***

Art Unit: 2123

Art considered pertinent by the examiner but not applied has been cited on form PTO-892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Proctor whose telephone number is (571) 272-3713. The examiner can normally be reached on 8:30 am-4:30 pm M-F.

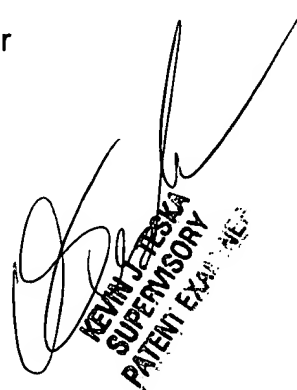
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin J Teska can be reached on (571) 272-3716. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-3713.

Any inquiry of a general nature or relating to the status of this application should be directed to the TC 2100 Group receptionist: 571-272-2100. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



jsp

Jason Proctor  
Examiner  
Art Unit 2123



KEVIN J. TESKA  
SUPERVISORY  
PATENT EXAMINER